

REMARKS

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03. "It is essential that office personnel find some motivation or suggestion to make the claimed invention in light of the prior art teachings." M.P.E.P. § 2144.08, Part II.A. A rejection based on a prima facie case of obviousness is improper if the combination of the references teach every element of the claimed invention, but fail to teach a motivation to combine. M.P.E.P. § 2143.01 (citing In re Rouffet, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998)).

If the "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." M.P.E.P. § 2143.01. Similarly, "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teaching of the references are not sufficient to render the claims prima facie obvious." M.P.E.P. § 2143.01. When evaluating whether one or more prior art references suggests or teaches all the claim limitations, each prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. M.P.E.P. § 2141.02.

With respect to claims 1-12, 25 and 26, the Examiner simply cannot combine the horse-and-buggy "staple" of Bungarz, a reference from two centuries ago, with Evans, a reference that is now nearly half a century old. As a practical matter, it is difficult to understand why no previous inventor had thought to modify the "staple" disclosed in Bungarz's 1887 patent with the lobes shown in Evans. Applicants respectfully submit that one skilled in the art has not been motivated for nearly 115 years to modify Bungarz with the lobes of Evans. The plain purpose of Evans is to provide better piloting and reduced torque when the screw is rotated into a "drilled hole." According to Evans "smaller power assembly tools may be employed; and the assembly tool is less likely to cam out of a slotted socket set screw or to break the slot." Evans Col. 1, ll. 45-48. Evans further provides that "[t]hree or more lobes are preferred for better piloting when screwing into a drilled hole." See Evans, Col. 2, ll. 52-59. Plainly, the loop design of the staple in Bungarz is incapable of being rotated into a drilled hole, much less a power tool. Clearly, it would be largely pointless to provide the lobes and threads of Evans on the staple of Bungarz. For at least this reason, the rejections of claims 1-12, 25 and 26 should be withdrawn. Additionally, for

at least this same reason, the rejections of claims 13-15, claims 16-18, 20, and 19-24 should be withdrawn as well.

Specifically, with regard to claims 1-12, 25, and 26, the Examiner proposes modifying the combination of Bungarz and Evans with the "conventional Vee thread" of Downey to "provide a lead in" to the "thread structure which reforms a nut thread." The "conventional Vee thread (23)" of Downey does not displace material as shown in FIG. 2. However, this is contrary to the purpose of the initial threads of Evans. Evans provides a trilobular along its entire length. Evans, Col. 2, ll. 31-35. As stated in Evans, the leading ends 32 and 40 of the crest and root of the screw thread are for the purpose of "the displacement of material." Evans, Col. 3, ll. 26-29. Consequently, one skilled in the art would not change the material displacing properties of the initial threads of Evans by providing the "conventional Vee thread (23)," which fails to displace material.

For at least these same reasons the Examiner's combination of Bungarz, Evans, and Donovan and the Examiner's combination of Bungarz, Evans, and Garver fails to render claims 16-24 obvious. One skilled in the art would not change the material displacing properties of the initial threads of Evans by providing either the "curved thread surface (at 48)" of Donovan or the "curved thread surface (FIG 9A) with curved flanks" and the "plateau thread surface (FIG. 9B) including plateaus" of Garver. As noted above, the purpose of the initial threads of Evans is material displacement, not anti-cross threading.

Applicant asserts that the subject matter of the present application is novel, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

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